

WEST VIRGINIA
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Forestry and Wood Industries

BY

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required several hundred feet of lumber in excess of the 11,200 feet now used in their construction.

The Present Lumber Industry.

The removal from this small county, through a period of 75 years or more, of hoop poles, tan bark, staves, shingles, cross-ties, lumber and logs, together with the clearing of the land by farmers, has practically exterminated the forests. The lumber industry is now reduced to the work of half a dozen small mills, which saw irregularly from place to place, and to the small operations of a few floating saw mills along the Ohio river.

The Present Forest Conditions.

Only the fragments of a forest now remain in the county. From 65 to 70 per cent of the whole area has been cleared for agricultural purposes. The largest tract of timber remaining is one of about 200 acres in Jefferson district. This has not been cut over because of its ownership by the infant heirs of an estate. As a rule the farmers' woodlots contain but little timber of any kind. In many cases even the cross-tie and pole timber are gone. Portions of numerous farms, especially in the oil fields, have become impoverished by long-continued cropping and are now overgrown with briars and brush.

It should be noted here that in some sections of the county there is a most promising growth of young trees of valuable kinds and that yellow locusts are beginning to occupy otherwise unprofitable ground in many places.

POCAHONTAS COUNTY.

Location and Area.

Pocahontas county was formed in the year 1821 from parts of Bath, Pendleton and Randolph. It lies on the eastern border of the state, the summit of the Alleghany mountains being the dividing line between the county and Virginia. Greenbrier bounds it on the south, Greenbrier, Webster and Randolph on the west, and Webster and Randolph bound it obliquely on the



VIEW IN THE LITTLE LEVELS OF POCAHONTAS COUNTY.

north. Its area, as given by the United State Geological Survey, is 858 square miles or 549,120 acres.

Topography.

"Although the highest mountain in the state is in Pendleton, the county of highest general elevation is Pocahontas. This county can hardly have an average elevation of less than 3,000 feet above the sea."* The eastern line follows the crest of the Alleghany mountains for a distance of more than 50 miles. Westward from this elevated border the surface descends by a succession of parallel ridges and stream channels to the valley of the Greenbrier river. Lying close to the western side of this river, and at an elevation of about 300 feet above it, are to be found in some places almost level areas of upland. Little Levels in the vicinity of Hillsboro is the principal one of these and, with its broad fields of grain and grass and with its border of wooded mountains, forms one of the most fertile and beautiful spots in West Virginia. The western side of the county is occupied by high mountains which are less regular in their trend than those on the east. The names and elevations of a few of the higher mountain peaks of the county are given below:

Bald knob	4,800 feet.
Spruce knob	4,750 feet.
Mace knob	4,700 feet.
Big Spruce knob	4,652 feet.
Bear mountain	4,600 feet.
Elleber ridge	4,600 feet.
Briery knob	4,534 feet.
Locust knob	4,392 feet.
Blue knob	4,368 feet.
Little Spruce knob	4,360 feet.
Gibson knob	4,360 feet.
Buck knob	4,356 feet.
Colaw knob	4,214 feet.
Bayards knob	4,150 feet.

*"West Virginia Agricultural Resources and Possibilities," p. 9

Greenbrier river, the principal stream, rises in the high mountains in the north and flows southward passing slightly east of the center of the county. Its drainage basin includes about three-fourths of the whole area of the county. The larger eastern tributaries of the Greenbrier, named from south to north, are Joshua creek, Beaver creek, Knapps creek, Thorny creek, North fork, and East fork. These tributaries, with their numerous branches, drain all the area east of the Greenbrier river. Its principal western tributaries are Locust creek, Stamping creek, Swago creek, Stony creek, Laurel run, Clover creek and West fork. The streams which drain the western side of the county, named from south to north, are North Fork of Cherry river, Cranberry river, Williams river, tributaries of the Gauley; Old Field fork, Slaty fork, Big Springs fork, and Dry fork, tributaries of the Elk river; Tygarts Valley river, tributary of the Monongahela; and Shavers fork, tributary of the Cheat river. A small area on the west is drained by the heads of the North, Middle and South forks of the Gauley river. It is thus seen that no fewer than 8 rivers have their sources in the mountains of Pocahontas, making it an area of great importance from the standpoint of water protection and distribution.

The Original Timber Conditions.

The county has been and still remains, one of the most important timber regions of the state. Red spruce once covered the high mountains lying west of the Greenbrier river basin and a large area in the north drained by the headwaters of the Greenbrier and Shavers Fork of Cheat. With and near the spruce grew such other woods as hemlock, black cherry, yellow birch, sugar maple, beech and chestnut. On the lower grounds between the mountainous sections of the east and west grew most of the hardwoods common to central West Virginia. These included such species as yellow poplar, black walnut, white and red oaks, basswood, white ash, hickories and maples. East of the Greenbrier river, even on the highest elevations, spruce was not found to any extent south of the town of Greenbank. White pine was distributed in large areas along Deer creek, Sitlington creek, Knapps creek, and other eastern tributaries of the Green-

brier river. The original stand of white pine has been estimated by some at 600 million feet, and by others at 1 billion feet.

The Lumber Industry.

The facts given below regarding the early lumber industry in the county were obtained largely from data collected for this report by Hon. A. D. Williams, of Marlinton.

We do not know precisely when and where the first lumber was manufactured in Pocahontas county; but we are certain that the first sawing was done by the old-fashioned whip saw and that this was followed by the water mill, or "up-and-down" saw mill, as it was commonly known. After this the portable steam mills began to operate, and in later years the modern band saw mills. The development of machinery for the manufacture of lumber, as illustrated in this county, has been nothing short of marvelous; and the change from one method of sawing to another in each case has marked the beginning of an epoch in the lumber industry.

It seems that little has been written concerning the saw and its part in the industrial history of the county, important as this has been, and that many of the interesting facts connected with the early use of timber have been lost with the pioneers themselves. There are a few men yet living, however, whose memory covers the whole period of time in which the hand operated whip saw has given place, step by step, to the huge lumber plant of the present day. On information given by these men, and on the records left in the remains of the early dwellings, we must depend for the fragments of history given below—fragments which would be lost entirely to the next generation.

It is evident that the first dwellings were built without the use of any instrument for sawing, and that all the parts—the log walls, the board roofs, and the puncheon floors—were shaped with the axe, the adz, and the frow. An examination of the dwellings built a few years later shows that their floors were made of whip-sawed lumber. Among the dwellings yet standing, which have floors of this kind, is the home of Martha Dilley, widow of the late Andrew Dilley, son and occupant of the home of the pioneer Martin Dilley. The floors in this dwelling were

laid of pine lumber and by long usage the softer parts of the planks have worn away so that now every knot and resin spot stands up prominently. It cannot now be ascertained who did the whip sawing for this floor.

The first whip saw known to have been used in the vicinity of Marlinton was owned by the McCollums and "Lowey" McCollum was known as the sawyer. For years he and Alexander Lamb did the neighborhood sawing. At the death of Lawrence McCollum the saw was sold to Levi Waugh and by him to James Courtney, the pioneer of the Courtney family in Pocahontas. At the latter's sale it was sold to William Irvine of the Verdant Valley vicinity.

In the Back Alleghany region, which is that part of the county west of the Greenbrier river from Durbin south to a point some distance below Cass, William Cassell was the possessor of a whip saw that he used until near the year 1880. The last work done with this saw, of which any note was taken, was in sawing plank for the home of William Cassell Jr. built by D. B. McElwee and C. B. Swecker in 1877. The older Graggs of the same section owned and operated a whip saw about 100 years ago.

The Burners, Yeagers, and Arbogasts, of the "Upper Tract" were the owners and operators of a whip saw in the vicinity of Travelers Repose many years ago.

In the lower Pocahontas, or Hillsboro region, doubtless the first whip saw brought to the county was owned and used by Charles and Jacob Kennison who, with John McNeel, settled in the Levels in the year 1765. Charles Kennison was considered a good artisan in that day and the old pioneer house of John McNeel and the residence of the late Claybourn McNeil, of Buckeye, still stand as samples of his skillful work. Ezekiel and Fillden Boggs owned and operated a whip saw during the early days of settlement in the Levels section; and later another saw was procured by John and Frank Williams, who did considerable work in that neighborhood.

It is probable that the Cackleys at Millpoint (then Cackley Town), the Gibsons and Hannahs at Yelk, and the Bradshaws of Knapps creek, all owned whip saws in the early history of the

county; but no definite information regarding the time and the extent of their work has been obtained.

The last whip sawing in the county of any note, was done by Andrew Amos and Andrew Workman about the year 1880. The lumber was used by L. M. and Geo. W. McClintic for the construction of the Tea Creek Hunting House, at the mouth of Tea creek.

According to information obtained from Isaac McNeil and others, a water-power saw mill was built by the McNeels some years after their settlement in the southern end of the county in the year 1765. It is probable that Charles Kennison, who planned and worked on the fort in that section, helped to construct the first saw mill.

In 1778 Valentine Cackley settled at Millpoint and erected a grist mill, saw mill, and tilt or forging hammer. He also started a tannery, and in later years a store, making this the central place of business in lower Pocahontas for many years. Later the sons of Valentine Cackley, Valentine Jr. and Joseph, succeeded their father and erected another mill, Valentine taking the lower mill and Joseph the upper. Joseph Cackley afterward sold his mill to Sampson L. Matthews who operated it for several years. Only broken pieces of the old mills now remain.

Thomas Casebolt built and operated a sash saw mill on the headwaters of Locust creek about the beginning of the 19th century. Shortly after this Josiah Beard Sr. built a saw and grist mill on the same creek. Near this time, also, John H. Ruckman built a dam and erected a mill at the mouth of Stamping creek, a tributary of Greenbrier river.

About 1850 James F. Hill built a saw mill on Rush run between Jacox and Lobelia; and a little later the venerable Peter Hill, to whom we are indebted for considerable information, built a saw mill on Hills creek. Still a little later Morgan Anderson built a mill on Bruffeys creek, and about the same time Henry N. Clark erected another on Robins fork of Spring creek not far from the county line and the old Hudson-Martin corner.

Paul McNeel built and operated a saw mill on Spice run for many years. This successful operation was east of the river and

most of the timber cut was white pine which could be sawed easily and bought at a very low price.

Thomas McNeel settled on 300 acres of land on Swago creek about the year 1770. Here he built a grist mill, loom, and powder mill, which he ran by water power. After his death his son, Jonathan McNeel Sr. used the power for sawing lumber, weaving cloth, making powder and grinding grain.

A sash saw mill was operated by Mike Propps above the mouth of Stony creek during the early years of the last century. All that now remains of this mill is a remnant of the race and dam. Farther up the creek the early Duffields had a saw and grist mill which was erected by William Cochran and Alexander Lamb. The place is now marked by the combination flouring mill, shingle mill, and saw mill owned by Godfrey Geiger and operated by water-power.

On Big Spring fork where McLaughlin's mill stood, Robert Moore built and operated a saw and grist mill. Lieut. Beverly Waugh, who furnished much information regarding the early saw mills, remembers when but a small boy of seeing Amos Barlow with red oxen hauling lumber from this mill to the home of his father, the late Rev. John Waugh of Indian Draft, to pay for blacksmith work prior to the year 1840. In later years Rev. John Waugh built a dam and erected a saw mill in the Indian Draft near his home. In connection with his other work of sawing lumber, blacksmithing and farming, he wheeled the first wagon in the county. The wheels of this wagon, which was owned by Robert Gay, were made of solid blocks of wood bound with iron tires.

David Gibson built a grist and saw mill on the waters of Elk about the year 1840 and did the neighborhood sawing and grinding for a time.

Andrew Amos had a grist and saw mill farther down the Elk at Roaring run on the Hogsett place, and John Hannah, known as "Black John Hannah," operated a saw mill on Old Field fork of Elk.

One of the early saw and grist mills of the county was erected at Clover Lick by Jacob Warwick, a pioneer settler in that section. This mill stood on the farm now owned by the Hon. C. P. Dorr.

Farther up the west side of the Greenbrier river at Stony Bottom an old mill, known as the Galford mill, where Adam Geiger's grist mill now stands, did the sawing for the inhabitants of that section.

On Leatherbark creek there were 2 sash saw mills, one owned by Allen Galford near Cass and the other about 5 miles up the creek owned by James Cassell.

Hugh McLaughlin owned a water saw mill about 4 miles west of Durbin.

Down on the east side of Greenbrier river Robert Gay built a mill and sawed white pine on Beaver creek at the point where the Underwood mill now stands. McCombs also had a saw mill on this creek.

On the waters of Knapps creek John Bradshaw, a pioneer settler, built a saw mill just above Huntersville near the beginning of the last century, and about the year 1830 Geo. Craig erected a saw mill at the Gum Friel place. This mill, long known as the Barker and Friel mill, did good work and was run steadily for some time. Near Driscoll, James T. Lockridge owned a saw mill which was built by Peter Lightner some time before the year 1800. The lumber from this mill was hauled to the western part of the county. Some of the ceiling, weatherboarding and flooring, used by the late Alexander W. Sharp in building one of the first frame houses in the county, was sawed on this mill and hauled by oxen for a distance of 20 miles.

Washington Moore and Samuel Harper each had a saw and grist mill on Knapps creek. James Sharp built a saw mill in 1825 near Frost on what is now the Aaron Sharp farm; and about the same time Rev. James Wanless erected a mill on the John F. Wanless farm, and another on the Robert D. McCutcheon place about 1835. Logs used in the first M. P. church built in the county were squared on this mill. The mill at the place now known as Dilleys Mill, was erected by the pioneer, Henry Dilley, in 1830.

At Dunmore on Sitlington creek Jacob Warwick built some kind of a saw mill in the early pioneer period. Later Isaac Moore erected a mill, or rebuilt the Warwick mill, and operated it steadily for many years. During a part of the time this mill was kept running day and night in order to meet the demand

for lumber there. Still later the Pritchards put up another mill at Dunmore; and another located on Sitlington creek about 5 miles from Dunmore was owned by Lindy Taylor.

One of the first saw mills stood on Little Back creek, a branch of Deer creek, where Daniel Kerr, soon after he returned from the Revolution, settled and built the mill and blacksmith shop which made his place the center of trade in that region for a time. In the early days, also, Benjamin Arbogast or his descendants, erected a saw mill at Greenbank; and 2 miles above on Deer creek at what is now known as the Heavener mill there has been a mill for over 75 years. Four miles above Greenbank Robert Brown still operates the only sash saw mill known to be running in the county.

Over a hundred years ago John Yeager settled at Travelers Repose and he and some of his descendants had a mill near that place.

The first steam saw mill in the county was used during the Civil War by the Federal troops. According to Lieut. Waugh, the same mill was used in Upshur county.

The first steam saw mill to do regular work in the county was put in operation in 1873 at Mace on the Dry fork of Elk by Dan, John, and Jake Garber, who came from Augusta county, Virginia. The cherry lumber sawed at this place was hauled on wagons over Elk mountain and rafted down the Greenbrier river to Ronceverte.

About 1875 John Marshall, also from Augusta county, moved a steam saw mill into Lower Pocahontas where it was in operation for some time. This mill is remembered by Levi Waugh as it stood near the town of Buckeye covered with mud after the flood of 1877.

The first steam saw milling in the Dunmore section was done by a man by the name of Sherman.

In 1830 Albert L. Whitmore started a steam saw mill in the county, and in 1882 Capt. Lokin, John Peters and Pritchard began to operate a mill of the same kind at Clover Lick. Charles Callison located a steam saw mill in the Levels in 1885, and in the following year Uriah Bird, McClintic and Peters began another operation. After this James Gibson commenced a portable saw mill operation which he continued for many years.

Other operators who deserve mention in connection with the portable saw mill industry prior to the coming of the railroads, are J. N. White, Jiles Sharp, Andy Wooddell, S. M. Gay, Frank Dilley and N. S. Duffield.

Most of the valuable black walnut that grew on the lowlands of the county was cut and floated out on the Greenbrier during the decade from 1880 to 1890.

Considerable white pine was cut, not only by means of the whip saw and water saw mills before mentioned, but for fence rails, shingles, puncheons, hewed frame timbers, and for all manner of wooden articles used about the homes of the early settlers. During a visit to the white pine region about Huntersville in the fall of 1909 Dr. A. D. Hopkins, of Washington, D. C., was informed that not less than 100 miles of worm fence had been built of white pine rails in that immediate vicinity.

The first white pine that was cut in large quantities for commercial purposes was floated out of the county in the early seventies by Col. Cecil Clay, who, in company with James Waugh, made an examination of the timber in the white pine belt during a trip up the Greenbrier in 1867. His work was done principally by negroes and oxen.

The *Greenbrier Independent* of March 11, 1871, gives an account of the incorporation of the Greenbrier River Boom, Lumber, Iron, Land, and Manufacturing Company, with James Caldwell, John A. Hunter, S. A. M. Syme, S. S. Thompson, R. P. Lake, S. C. Ludington, R. F. Dennis, Matthew Wallace, B. F. Harlow, and Jesse Bright, as members of the firm. The operations of this company followed the work of Col. Clay and continued until about the year 1882, when it was succeeded by the St. Lawrence Boom and Manufacturing Company, which at that time built its booms at Ronceverte. Much of the lumber was cut by Smith and Whiting and Whiting and Denny, and by Col. Dan. O'Connell, who afterward organized the Cumberland Lumber Company.

The Chesapeake and Ohio railroad reached the county in 1899, was extended up to Cass in 1901, to Durbin in 1902, and to Winterburn in 1905. The Coal and Iron railroad was extended from Elkins to Durbin in 1903. Before the building of these railroads only a small beginning had really been made in the

immense forests of the mountainous parts of the county; but with their coming began an active lumber industry which has continued to grow until today there are 14 huge band saw mills and about 26 circular saw mills in operation within the county. These, according to figures furnished by Mr. J. M. Paris, of Marlinton, have an approximate combined capacity of 350 million feet annually. Practically all the virgin forests of the county are in the hands of operators who have already made large openings and who are prepared to complete the cutting of all valuable timber within a comparatively few years.

The Present Forest Conditions.

There are about 212,000 acres of virgin forest and 138,000 acres of cut-over forest now remaining in the county.

The forests lie in an almost solid body along the western side of the county and in the northern end, and in large scattered tracts on the east of Greenbrier river. The most extensive virgin areas are to be found on the waters of Cherry, Cranberry, Williams, and Elk rivers in the region adjoining Webster and Randolph counties; on the west face of the Alleghany mountains north of the village of Frost; on both sides of the East fork of Greenbrier river in the region of Travelers Repose; and along the east side of Greenbrier river from Hosterman to the Greenbrier county line. Smaller tracts are scattered among the areas of cut-over forest in nearly all sections. The largest areas of farm land lie in a broad, irregular belt on the northwest side of the Greenbrier river from Clover Lick to Spice Run, and in the smooth uplands and valleys which lie between the mountain ranges on the east of Greenbrier river.

The white pine was nearly all cut and removed between the years 1882 and 1900. In the section about Huntersville, drained by tributaries of Knapps creek, there is a fairly good reproduction of young white pines; but in the region north of Dunmore fires have repeatedly burned over the ground destroying the seeds and seedlings; and the area which once contained a valuable forest of white pine is growing up in scrubby oaks, chestnuts, and other hardwoods. A few of the cut-over forest areas are in a good condition and others have been abandoned to the

fires which frequently rage along the Coal and Iron railroad and in other sections.

According to William T. Price, author of "Historical Sketches of Pocahontas County," "The climate of this county has passed through a great change in the past 80 or 90 years. It was once a rare thing for corn to ripen anywhere in the region, and in planting it was the intention merely to have soft corn for use in fattening beef or pork in case the mast failed." In these days, since a considerable area of land has been cleared and cultivated during a long period of time, fine crops of corn and other grains are matured in every farming community.

Cranberry Glades.

The high region covering the western part of Pocahontas county, drained by hundreds of clear mountain brooks that flow into the Cranberry, the Williams, the Gauley, and the Elk rivers, was once known as the "Wilderness" or the "Wilds of Pocahontas," a region until recently overgrown with a dense, undisturbed forest and abounding in game of many kinds. Here, in the midst of the "Wilderness" and on the border of the greatest forest remaining in the state, are the Cranberry Glades near the head of Cranberry river.

There is, in reality, only one glade, containing from 250 to 300 acres of deep, wet soil overgrown in some places with a thicket of shrubbery and in others carpeted with lichens, mosses, and sedges. Within the glade there are 5 open spaces the names and areas of which are given below:

Big Glade	56 acres.
Flag Glade	20 acres.
Long Glade	14 acres.
Round Glade	8 acres.
Little Glade	2 acres.

Each open area is separated from the others by winding and sluggish streams which are bordered by fringes of alder, hollies and other shrubs.

There is, perhaps, no area of equal extent in West Virginia which is of greater importance for its influence on water flow,

nor one more interesting to the student and collector on account of its varied forms of plant and animal life than this glady region lying at an elevation of 3,100 feet above the sea and surrounded by mountains which rise from 1,000 to 1,500 feet above it.

A few of the characteristic species of plants, mammals and birds collected by a party which visited the Glades in July, 1909, are named below:

Plants.

Red Spruce, *Picea rubens*. Abundant on margins of glades and on mountain summits.

Quaking Aspen, *Populus tremuloides*. Growing on margin of glades.

Mountain Ash, *Sorbus americana*. Common around glades.

Ground Hemlock, *Taxus canadensis*. Shrub growing abundantly in wet, shady places.

Northern Rattlesnake Plantain, *Epipactis repens* var. *ophioides*.

Collected by Dr. John L. Sheldon under a hemlock tree near the edge of the glades.

Rose Pogonia, *Pogonia ophioglossoides*. Common in sphagnum moss in open glades.

Horned Bladderwort, *Utricularia cornuta*. Found growing in Big Glade.

Round-leaved Sundew, *Drosera rotundifolia*. Common in open glades.

Sphagnum Moss, *Sphagnum Girgensohnii* Russ. This northern species was found growing with other Sphagnums in the glades and collected by Dr. Sheldon.

American Cranberry, *Vaccinium macrocarpon*. Common on edges of open glades.

Small Cranberry, *Vaccinium Oxycoccos*. Abundant over all the open glades. A peculiar "speckled" form of this berry was collected in Round and Flag glades.

Mammals.

Yellow-cheeked Meadow Mouse, *Microtus chrotorrhinus*. One specimen collected in July, 1909 on southern edge of glades by Fred E. Brooks. Not taken before south of the Adirondack mountains, New York.

Masked Shrew, *Sorex personatus*. Common in open glades and about their borders.

Smoky Shrew, *Sorex fumeus*. Less common.

Red-backed Mouse, *Evotomys gapperi*. Most abundant in wooded border of glades.

Birds.

Alder Flycatcher, *Empidonax traillii alnorum*. Collected on margin of Big Glade by Earle A. Brooks.

Swamp Sparrow, *Melospiza georgiana*. Seen in alder thickets.

Magnolia Warbler, *Dendroica maculosa*. Common.

Barred Owl, *Strix varia*. Abundant.

PRESTON COUNTY.

Location and Area.

Preston county was formed in 1818 from a part of Monongalia. It is separated from Pennsylvania on the north by a portion of the Mason and Dixon line, and from Maryland on the east by a line running north from the Fairfax Stone to the Pennsylvania line. Tucker, Barbour, Taylor and Monongalia join it on the south and west. Its area is 671 square miles or 429,440 acres.

Topography.

Most of the county is high and not a little of it may be classed as mountainous. The principal mountain ridge enters on the extreme southwest from Barbour county and passes about 3 miles west of Terra Alta. South of Cheat river this mountain is known as Laurel ridge and north of it as Briery mountain. Over most of the county the ridges have no regularity of form or trend. In many localities, particularly in the region north of Terra Alta, the surface spreads out into high, rolling uplands; and in nearly all sections the tops of hills and mountains are smooth and the slopes gentle. In some places, however, as in